

# Automated Exercise and Assessment System (AEAS)



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**Presented By:**





# Automated Exercise and Assessment System (AEAS)



## AEAS Background

- Development led by National Guard Bureau
- Intended for Emergency Responders & Consequence Managers
- Scenarios involving Weapons of Mass Destruction
- Assessment and Training

*AEAS provides a realistic training and assessment tool that increases emergency responder's readiness to manage WMD terrorist incidents.*





# Automated Exercise and Assessment System (AEAS)

**SAIC**  
An Employee-Owned Company

## Roles of Simulation

- **Predict Performance**
- **Train Decision Makers**
- **Analyze Resources**
- **Explore Alternatives**
- **Plan Operations**
- **Educate and Market**





# Automated Exercise and Assessment System (AEAS)



## AEAS Design Imperatives

- **Scenarios across full spectrum of WMD incidents**
- **Ability to train in "your jurisdiction"**
  - Similar terrain and population density
  - Actual resources
  - Actual task organization
  - Actual operational procedures
- **Provide both training and assessment**
  - Modes of operation
  - Resource and task assessment
  - Two training modes
- **Minimize H/W Requirements**



# Automated Exercise and Assessment System (AEAS)

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## Functional Areas (Exercise Audience)



**Admin**



**Environmental  
Health**



**Fire**



**Law  
Enforcement**



**Animal  
Control**



**Elected  
Official**



**Fatality  
Management**



**Logistics**



**Chaplaincy**



**Emergency  
Management**



**Food &  
Water**



**Military  
Support**



**Commo**



**EMS**



**HAZMAT**



**CISM/Mental  
Health**



**Debris  
Management**



**Energy**



**Incident  
Command**



**Medical  
Facilities**



**Donations  
Management**



**EOD**



**Info &  
Planning**



**Mass  
Care**



# Automated Exercise and Assessment System (AEAS)



## Functional Areas (Exercise Audience)



**Operations**



**Resource  
Management**



**Trade  
Unions**



**Public  
Health**



**Search &  
Rescue**



**Transportation**



**Public  
Informaiton**



**Scene  
Safety**



**Veterinary  
Medicine**



**Public  
Works**



**Scene  
Security**



**Voluntary  
Organizations**



# Automated Exercise and Assessment System (AEAS)



Functional Area	# Tasks
Administration	15
Animal Control	7
Communications	10
Debris Management	21
Elected Official	9
Emergency Management	32
Emergency Medical Services	19
Energy	7
Environmental Health	8
Explosive Ordinance Disposal	11
Fatality Management	21
Firefighting	32
Food	9
Hazardous Materials	31
Incident Command	24
Law Enforcement	21
Logistics	14
Mass Care	11



# Automated Exercise and Assessment System (AEAS)



Functional Area	# Tasks
Medical Facilities	14
CISM/Mental Health	9
Military Support	5
Operations	26
Planning and Information (Intel)	31
Public Health	9
Public Information	17
Public Works	7
Resource Support	5
Scene Safety	15
Scene Security	20
Search and Rescue	3
Trade Unions	7
Transportation	9
Veterinary Medicine	6
Volunteer Organizations	14
Donations Management	13



# Automated Exercise and Assessment System (AEAS)



## Expected Action Assessment

Player's actions are captured during the exercise and analyzed against vetted expected actions. An assessment is made for each expected action. These actions can be sorted by function; an overall assessment is not assigned.



**Player executes the expected action.**



**Player, with prompting from simulated entities, executes the expected action.**



**Player, with prompting from simulated entities, fails to execute the expected action.**

*Player's action must take place within established time and resource constraints.*





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## Tasks and Expected Actions



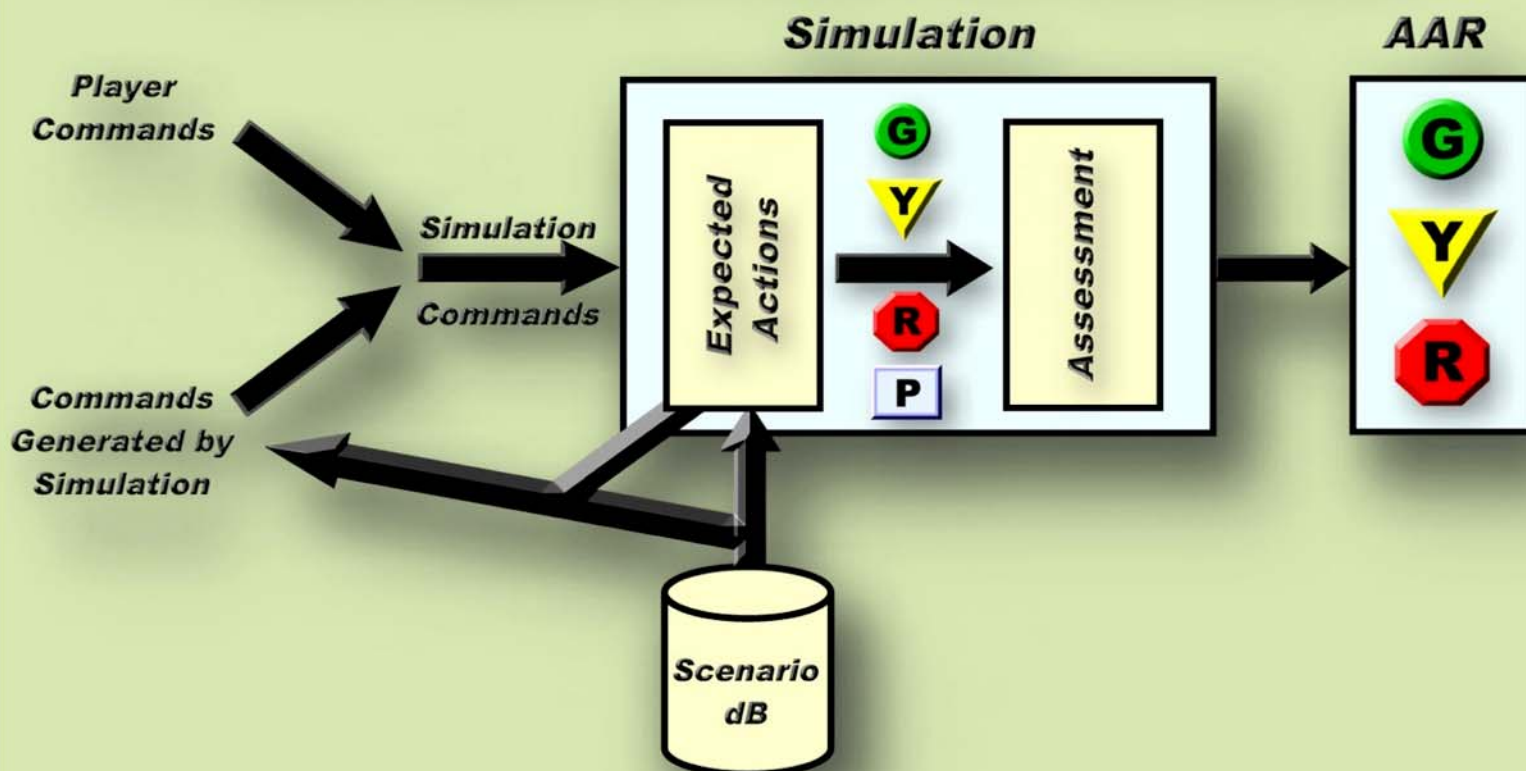
*Tasks are applied to specific scenarios to derive the Expected Actions*



# Automated Exercise and Assessment System (AEAS)

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## Tasks, Expected Actions and Assessment





# Automated Exercise and Assessment System (AEAS)

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## Scenarios



**Anti-Abortion, Domestic  
Anthrax Hoax**



**Anti-Government, Domestic  
Anthrax Contamination**



**Retribution, Foreign Group  
Radiological**



**Domestic Group  
Sarin, Public Outdoor**



**White Supremacist Domestic  
Multiple Chemicals, Derailment**



**Retribution, Foreign Group  
Conventional Explosive**



**Retribution, Foreign Group  
Radiological, Outdoor Event**



**Retribution, Foreign Group  
Anthrax, Line Source**



**Military Diversion, State Sponsor  
Smallpox, Resort Hotel**



**Retribution, Foreign Group  
Nuclear, Downtown Area**



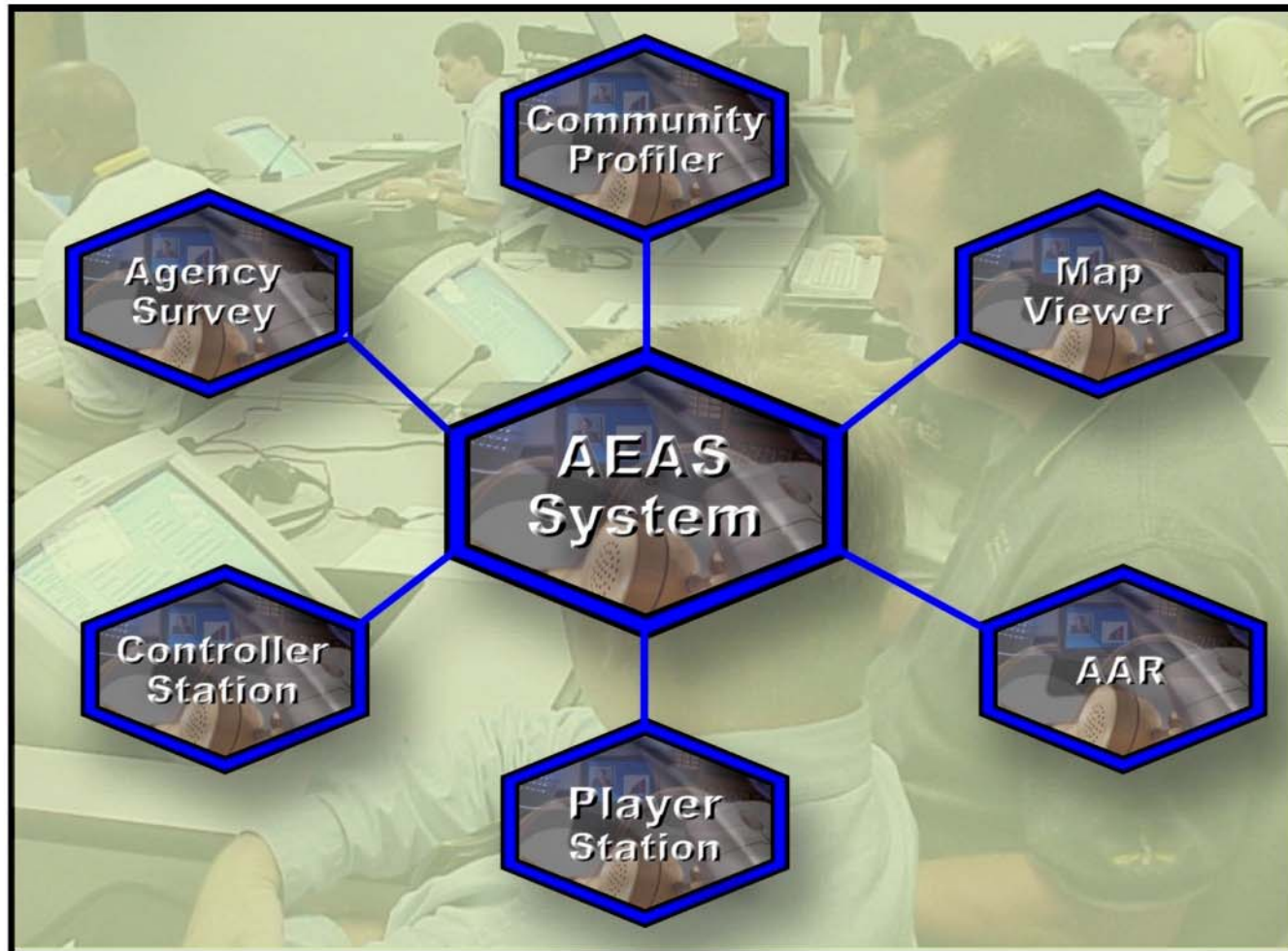
**Disgruntled Individuals  
Foot & Mouth, Several Farms**



# Automated Exercise and Assessment System (AEAS)

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## System Components





# Automated Exercise and Assessment System (AEAS)



## AEAS Concept of Operation (CONOP)

**Community's Agencies Complete & Collate Survey**

### Construct Survey

- Functional Areas
- Resources
- Personnel
- Facilities
- Mutual Aid Pacts

**OR**

### Use Existing Survey:

- Metropolis
- Upperton
- Ruralton County
- Others

*User's guide provided for Agency Survey and  
Community Profile Builder*



# Automated Exercise and Assessment System (AEAS)



## AEAS CONOP - Exercise Day



*Documentation: Player's manual, controller's manual, AAR manual, glossary, system quickstart and functional area quickstarts.*



# Automated Exercise and Assessment System (AEAS)

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## Agency Survey Creates:

- Resources
- Personnel
- Facilities
- Mutual Aid Pacts

Agency  
Survey





# Resource Survey



Choose whether your personnel is volunteer only, paid only, or a combination

Functional Area: Emergency Medical Services

Personnel: ☐ Paid Only ☐ Volunteer Only ☒ Paid and Volunteer

Paid Professional Staff

Total number of operational staff: 320

Number of shifts 3

Number of operational staff per Shift 1: 85

Number of operational staff per Shift 2: 85

Number of operational staff per Shift 3: 85

Percentage of staff in National Guard (NG): 05

Percentage of staff in Reserves: 03

Attrition rate (sick, vacation, not including NG): 01

Minimum staffing to maintain jurisdiction: 82

Volunteer Staff

Total number of volunteers: 123

Number of shifts 3

Volunteers expected per alarm 1: 25

Volunteers expected per alarm 2: 50

Volunteers expected per alarm 3: 75

Percentage of staff in National Guard (NG): 08

Percentage of volunteers in Reserves: 05

Attrition rate (sick, vacation, not including NG): 0

Minimum staffing to maintain jurisdiction: 0

Back Next Cancel



# Automated Exercise and Assessment System (AEAS)



## Ladder

- Fire suppression
- Rescue
- Pump water
- Lighting
- Aerial
- HAR
- Collapse
- Confined space

## Engine

- Fire suppression
- BLS
- Rescue
- Pump water
- Carry water
- Set Up Lights

## Fire Rescue

- ALS
- HazMat
- Rescue
- Lighting
- Rehab
- HAR
- Collapse
- Confined space

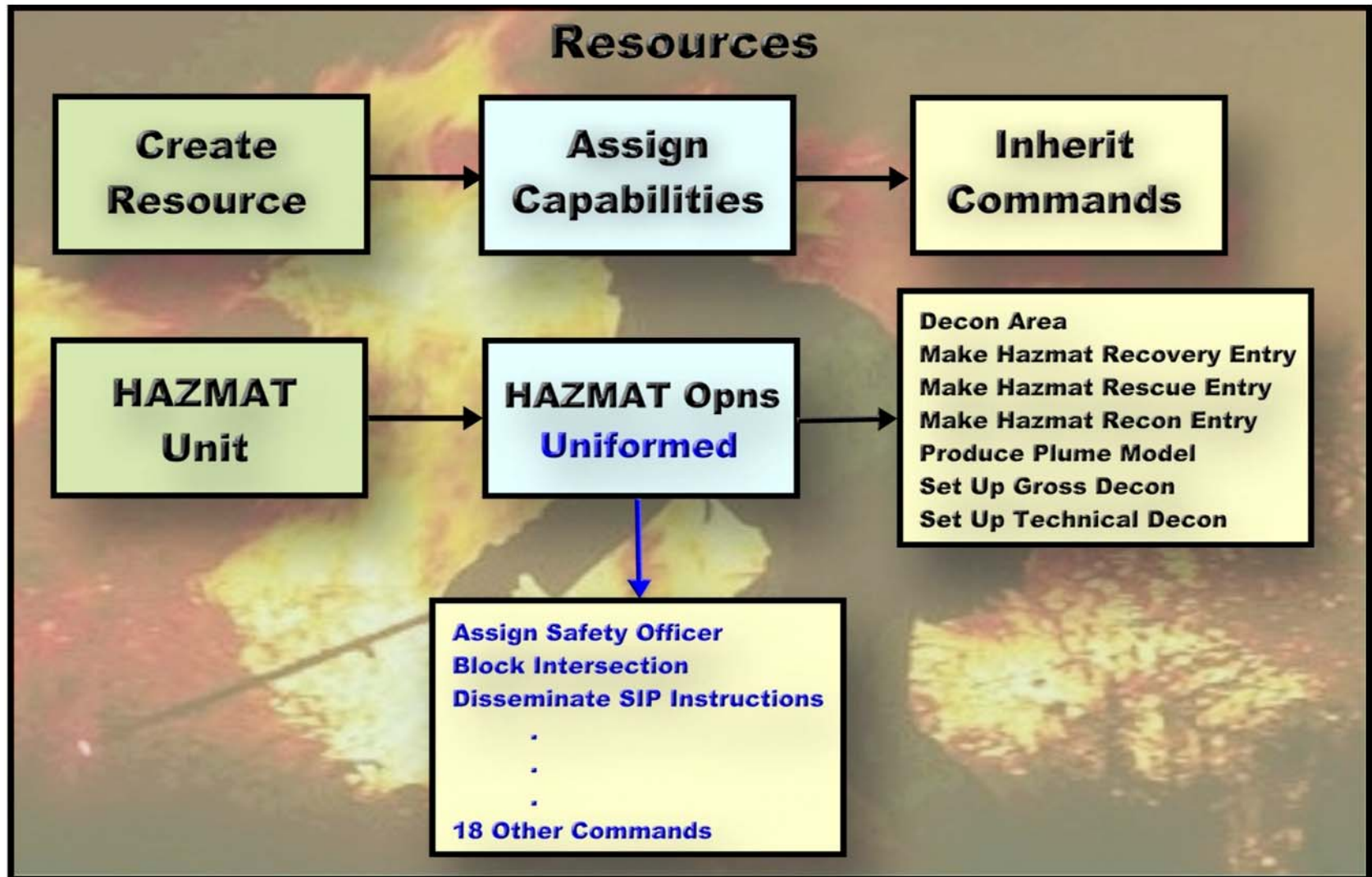
## EMS Transport

- ALS
- Land transport
- Mass casualty



# Automated Exercise and Assessment System (AEAS)

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# Automated Exercise and Assessment System (AEAS)



## Medical Facilities Capabilities and Supplies

- Staffed beds
  - \_\_\_\_\_ #pediatric
  - \_\_\_\_\_ #critical care/ICU
  - \_\_\_\_\_ #airborne/infectious disease
  - \_\_\_\_\_ #OR
  - \_\_\_\_\_ #Burn
- Decon capabilities
  - \_\_\_\_\_ #patients/hr
- Morgue capabilities
  - \_\_\_\_\_ #remains
- Medicine capabilities
  - \_\_\_\_\_ #mg cipro
  - \_\_\_\_\_ #mg doxycycline
  - \_\_\_\_\_ #mg atropine
- Ventilation capabilities
  - \_\_\_\_\_ #ventilators



# **Automated Exercise and Assessment System (AEAS)**



## **After Action Review (AAR) Toolset**

### **AEAS After Action Review (AAR) - Definition**

- **Professional discussion of an event**
- **Based on performance standards**
- **Enables emergency responders to discover:**
  - **What happened**
  - **Why it happened**
  - **How to sustain strengths**
  - **How to improve weaknesses**



# Automated Exercise and Assessment System (AEAS)

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## After Action Review - Major Components

### Exercise Overview

Exercise Summary  
Scenario Narrative  
Participants  
Comms Channels  
Local Resources  
State Resources

### Summary of Events

Task Assessment  
Location  
Functional Area  
Supporting Detail  
Time  
Reminders  
Prompts

### Outcomes

Charts  
Radio Messages  
eMessages  
Training Prompts  
Exercise Releases  
Exercise Postings

### Key Issues

Policy  
Legal  
Cross Jurisdiction  
Authority



# Controller Station




AEAS Exercise: Controller Station

File Exercise Mode Help

Resources Scenario Players Comm Channels


Select the scenario to exercise.

Select RDD1



Incident: Dirty bomb attack on fully populated government building  
Attack: Conventional explosive and radioactive material  
Location: 25 ft from front of the courthouse  
Time: [blank]  
Agent: [blank]

Select CW1



Incident: Crowded outdoor gathering during Fourth of July celebration  
Attack: Conventional explosive and chemical (nerve agents)  
Location: In an open park  
Time: 9:30 pm July 4th  
Agent: Sarin in liquid form  
[Click here for full description ...](#)

Exercise Setup Tracker

Jurisdiction

Orlando  
Orange, FL

Location

metropolis

Scenario

CW1

Player Config

Commo

unselected

Message

You have selected Scenario CW1:  
Sarin, Public Outdoor Event

OK

Start | Micro... | D:\ae... | C:\W... | AEAS... | C:\W... | AEAS... | C:\W... | AEAS... | 4:41 PM



# Controller Station



AEAS Exercise: Controller Station

File Exercise Mode Help

Hostname: orl742 Controller: Mike Event Day: Time:

Resources Scenario Players Comm Channels ScenarioScript GroundTruth TCS

Functional Area View Expected Action View

Law Enforcement Incident Command HAZMAT Firefighting Emergency Medical Services

[-] Law Enforcement

- [-] Situational Event: 1
  - [-] Task: Command and Control
    - [-] SubTask 1: Establish Law Enforcement Group within ICS
      - P** Expected Action: Establish LE command post.
    - [-] SubTask 2: Survey the scene
      - NA** Expected Action: Request additional units.,
    - [-] SubTask 3: Approach the scene
      - P** Expected Action: Identify entry and exit routes.
    - [-] SubTask 4: Detect/monitor, identify and classify HAZMAT
    - [-] SubTask 5: Establish proper control zones
    - [-] SubTask 6: Establish perimeter for scene and maintain zone control
      - P** Expected Action: Establish and secure scene perimeter.
    - [-] SubTask 7: Reassess control zones
    - [-] SubTask 8: Establish on-scene media area
      - P** Expected Action: Establish media area.
    - [-] SubTask 9: Don appropriate PPE
    - [-] SubTask 10: Conduct evacuation and alert operations
      - NA** Expected Action: Evacuate area
    - [-] SubTask 11: Perform traffic control and emergency routing
      - P** Expected Action: Block intersections to control traffic around site.

Exercise  
Setup  
Tracker

Jurisdiction

Orlando  
Orange, FL

Location

metropolis

Scenario

CW1

Player Config

Commo

Done



# Controller Station



AEAS Exercise: Controller Station

File Exercise Mode Help

Resources Scenario Players Comm Channels

Communications Channels

	Public Information	<input checked="" type="checkbox"/> Radio1	<input type="checkbox"/> Radio2	<input type="checkbox"/> Radio3	<input type="checkbox"/> Radio4	<input type="checkbox"/> Radio5	<input type="checkbox"/> Radio6	<input type="checkbox"/> Phone
	Law Enforcement	<input checked="" type="checkbox"/> Radio1	<input type="checkbox"/> Radio2	<input type="checkbox"/> Radio3	<input type="checkbox"/> Radio4	<input type="checkbox"/> Radio5	<input type="checkbox"/> Radio6	<input type="checkbox"/> Phone
	Incident Command	<input checked="" type="checkbox"/> Radio1	<input type="checkbox"/> Radio2	<input type="checkbox"/> Radio3	<input type="checkbox"/> Radio4	<input type="checkbox"/> Radio5	<input type="checkbox"/> Radio6	<input type="checkbox"/> Phone
	HAZMAT	<input checked="" type="checkbox"/> Radio1	<input type="checkbox"/> Radio2	<input type="checkbox"/> Radio3	<input type="checkbox"/> Radio4	<input type="checkbox"/> Radio5	<input type="checkbox"/> Radio6	<input type="checkbox"/> Phone
	Firefighting	<input checked="" type="checkbox"/> Radio1	<input type="checkbox"/> Radio2	<input type="checkbox"/> Radio3	<input type="checkbox"/> Radio4	<input type="checkbox"/> Radio5	<input type="checkbox"/> Radio6	<input type="checkbox"/> Phone
	Emergency Medical Services	<input checked="" type="checkbox"/> Radio1	<input type="checkbox"/> Radio2	<input type="checkbox"/> Radio3	<input type="checkbox"/> Radio4	<input type="checkbox"/> Radio5	<input type="checkbox"/> Radio6	<input type="checkbox"/> Phone

Send to Simulation

Exercise Setup Tracker

Jurisdiction

Orlando  
Orange, FL

Location

metropolis

Scenario

CW1

Player Config

Commo

unselected

Start | Micro... | D:\ae... | C:\W... | AEAS... | C:\W... | AEAS... | C:\W... | AEAS... | 4:43 PM



# Automated Exercise and Assessment System (AEAS)



Point of Contact:

Mr. Dan Donohue  
National Guard Bureau  
703.607.2540

[Daniel.Donohue@ngb.af.mil](mailto:Daniel.Donohue@ngb.af.mil)